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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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03/29/2004

Woo-Seog Park

2060-3-60

5006

35884

7590

10/26/2010

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EXAMINER

JAIN, ANKUR

ART UNIT

PAPER NUMBER

2618

NOTIFICATION DATE

DELIVERY MODE

10/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/812,779	Applicant(s) PARK, WOO-SEOG	
	Examiner ANKUR JAIN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-40 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-40 and 43-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>13 September 2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 2nd, 2010 has been entered.

Claim Objections

2. **Claim 40** is objected to because of the following informalities:
- (a) "Voice processor" should be changed to "audio processor."

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 35 and 40** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to **claim 35**, the claimed limitation, “wherein the amplified ring tone signals and the amplified voice signals are input to the filter via a first path which originates from the output of the amplifier” is considered new matter, because after a thorough examination, Applicant’s filed specification in Paragraph 0018 only discloses that the “amplified ring tone signal” is “input to the filter” via a **second path (not a "first path")** which originates from the output of the amplifier.”

With respect to **claim 40**, the claimed limitation, “wherein the amplified ring tone signals are output to the first path to be input to the filter” is considered new matter, because after a thorough examination, Applicant’s filed specification in Paragraph 0018 only discloses that the “amplified ring tone signals” are “output to the” **second path (not a "first path")** “to be input to the filter.”

The Examiner suggests Applicant amend the claims to be in better accord with the specification in order to advance prosecution and advance towards allowance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. **Claims 35-40 and 43-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, (hereafter referenced as AAPA), in view of Saiki et al, US Patent 6,259,935 (hereafter referenced as Saiki).

Regarding **Claim 35 and Claim 40**, AAPA teaches "a method and apparatus of controlling quality of output produced by a multifunction device (MFD) capable of producing both sound and vibration in response to receiving electronic signals, wherein the MFD is embedded in a mobile communication system, the method comprising: determining whether the mobile communication system is in a first, second or third state" (see Fig.2 and par 0010-0015). The claimed limitation clearly reads on processing unit 10 determining the "state" of either voice, ring or vibration. AAPA also teaches "in the first state, amplifying voice signals produced by an audio processor of the mobile communication system without modulating the amplified voice signals" (see Fig.2 and par 0012). AAPA also teaches "providing the amplified voice signals to the MFD via a first path" (see Paragraph 0012 and Figure 2). AAPA also teaches "in the second state, amplifying ring tone signals, and providing the amplified ring tone signals to the MFD" (see Paragraphs 0010 through 0015 and Figure 2). AAPA also teaches "in the third state, amplifying a vibration signal, and providing the amplified non-filtered vibration signal to the MFD" (see Paragraph 0014 and Figure 2). AAPA also teaches "wherein the voice signals, the ring tone signals, and the vibration signal are amplified in an amplifier external to the audio processor" (see Paragraphs 0010 through 0015 and Figure 2). AAPA also teaches "wherein the amplified non-filtered vibration signal is input to the MFD via a second path which originates from the output of the amplifier"

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(see Paragraph 0014 and Figure 2). AAPA does not teach “a switch; filtering; and removing low frequency resonance components that fall below a first threshold; and external filter.” However, Saiki generally teaches “a switch; filtering; and removing low frequency resonance components that fall below a first threshold; and external filter” (see Column 11 lines 65-67, Column 12 lines 1-25, and Column 12 lines 34-46, and Figure 7). The claimed limitation clearly reads on high-pass filter 20. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify AAPA to incorporate filtering; and removing low frequency resonance components that fall below a first threshold; and external filter as taught by Saiki, so that when sound is generated in AAPA, such as ring tones or voice, the high-pass filter 20 of Saiki would be incorporated in AAPA to remove any low frequency components, thereby improving sound quality in the terminal of AAPA.

Regarding **Claim 36 and 43**, AAPA teaches “the first, second, third states are set by a user of the mobile communication system” (see Fig.2 and paragraphs 0010-0015).

Regarding **Claim 37 and 44**, AAPA teaches “the MFD produces an audio voice in the first state” (see Fig.2 and paragraphs 0010-0015).

Regarding **Claim 38 and 45**, AAPA teaches “the MFD produces a ring tone in the second state” (see Fig.2 and paragraphs 0010-0015).

Regarding **Claim 39 and 46**, AAPA teaches “wherein a user sets the MFD to produce a vibration in the third state” (see Fig.2 and paragraphs 0010-0015).

Response to Arguments

6. Applicant's arguments filed July 2nd, 2010 have been fully considered but they are not persuasive. The Examiner firmly submits that AAPA teaches "a method and apparatus of controlling quality of output produced by a multifunction device (MFD) capable of producing both sound and vibration in response to receiving electronic signals, wherein the MFD is embedded in a mobile communication system, the method comprising: determining whether the mobile communication system is in a first, second or third state" (see Fig.2 and par 0010-0015). The claimed limitation clearly reads on processing unit 10 determining the "state" of either voice, ring or vibration. AAPA also teaches "in the first state, amplifying voice signals produced by an audio processor of the mobile communication system without modulating the amplified voice signals" (see Fig.2 and par 0012). AAPA also teaches "providing the amplified voice signals to the MFD via a first path" (see Paragraph 0012 and Figure 2). AAPA also teaches "in the second state, amplifying ring tone signals, and providing the amplified ring tone signals to the MFD" (see Paragraphs 0010 through 0015 and Figure 2). AAPA also teaches "in the third state, amplifying a vibration signal, and providing the amplified non-filtered vibration signal to the MFD" (see Paragraph 0014 and Figure 2). AAPA also teaches "wherein the voice signals, the ring tone signals, and the vibration signal are amplified in an amplifier external to the audio processor" (see Paragraphs 0010 through 0015 and Figure 2). AAPA also teaches "wherein the amplified non-filtered vibration signal is input to the MFD via a second path which originates from the output of the amplifier" (see Paragraph 0014 and Figure 2). AAPA does not teach "a switch; filtering; and

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removing low frequency resonance components that fall below a first threshold; and external filter." However, Saiki generally teaches "a switch; filtering; and removing low frequency resonance components that fall below a first threshold; and external filter" (see Column 11 lines 65-67, Column 12 lines 1-25, and Column 12 lines 34-46, and Figure 7). The claimed limitation clearly reads on high-pass filter 20. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify AAPA to incorporate filtering; and removing low frequency resonance components that fall below a first threshold; and external filter as taught by Saiki, so that when sound is generated in AAPA, such as ring tones or voice, the high-pass filter 20 of Saiki would be incorporated in AAPA to remove any low frequency components, thereby improving sound quality in the terminal of AAPA.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 7:30 am to 5:00 pm, EST, Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan can be reached on 571-272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ankur Jain/

Examiner, Art Unit 2618

10/15/2010

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618